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AI (Cont)

a pair of thermal rolls having annular projections, the thermal rolls being arranged to provide a nip between the annular projections; and

a conveying device arranged to convey the film which forms the package bag through the nip between the annular projections of the pair of thermal rolls so as to form the strippable seal,

wherein at least one of the annular projections has a wavelike or zig-zag shape such that the strippable seal has a wavelike or zig-zag shape.

REMARKS

Favorable reconsideration of the present application is respectfully requested.

New Claim 2 has been introduced. Claim 2 corresponds to Claim 1, except that it further recites that the thermal rolls are arranged to provide a nip between the annular projections. Basis for this can be found in Figure 12 and at page 24, lines 8-9. New Claim 2 also further recites that the strippable seal has a wavelike or zig-zag shape. Basis for this can be found at page 30 in Figure 12. Claims 1 and 2 are active in the application, and are believed to be patentable.

The claims are directed to a device for continuously producing a package bag having a strippable seal formed in at least a part of a thermally-sealed side portion. For example, a package bag may have thermally-sealed side portions 4, one of which (e.g., 4a) is a strippable seal having a wave-like shape, which shape concentrates the forces and helps initiate separation of the strippable seal.

According to the invention, the strippable seal is formed by a pair of thermal rolls having annular projections between which the film is conveyed to form the strippable seal, wherein at least one of the annular projections has a wave-like or zig-zag shape. For

example, referring to the non-limiting embodiment of the figures, a film F is doubled or folded and delivered by a conveying device including the side rolls 60 to the nip between the thermal rolls 81. As best seen in Figures 12-15, the thermal rolls each includes annular projections 82 arranged to provide therebetween the nip through which the film is conveyed. One or more of the annular protrusions or projections 82 has a zig-zag portion 82a-82c, so as to produce the wave-like or zig-zag shape for the strippable seal, as shown in Figure 12. These features are recited in Claim 1 and new Claim 2.

Claim 1 was rejected under 35 U.S.C. § 102 as being anticipated by the U.S. patent to Kanemitsu et al. The Examiner there alleged that the rolls 18 are thermal rolls with annular projections for embossing a wavelike or zig-zag shape upon bag material 29, and thereby producing a strippable seal 63. However, Applicant respectfully traverses this rejection.

Kanemitsu et al is directed to a bag with a snap zipper which is sealed by the engagement of the snap elements 24 and 25. The snap elements are provided on a tape 13 which is welded to the bag by ultrasonic sealing. To this end, a pair of ultrasonic welders 17 each includes an ultrasonic oscillator 16, an ultrasonic horn 15 and an anvil 18 for receiving ultrasonic energy (column 9, lines 37-51). The anvil 18 has an outer peripheral knurled surface 28 in the form of rhombic patterns, strip patterns in the axial direction or strip patterns in the circumferential direction. The knurled surface 28 serves to prevent a relative positional displacement between the anvil 18 and the tape 13 (column 10, lines 32-39).

Thus, Kanemitsu et al does not anticipate the subject matter of Claim 1. The anvils 18 of Kanemitsu et al are merely ultrasonic anvils and are not thermal rolls having annular projections. Beyond this, the conveying system of Kanemitsu et al does not (1) convey the package material 10 between annular projections of a pair of thermal rolls (2) to form a strippable seal. Instead, the package material 10 is (1) conveyed between the anvils 18 and

the ultrasonic horn 15 (Figure 8), which horn 15 lacks annular projections, and (2) bonds -- does not "form" -- the "strippable seal" 13 to the bag.

Finally, the ultrasonic anvils 18 do not have a "wavelike or zig-zag shape." The knurling 28 forms rhombic patterns or linear patterns, but there is no description of a zig-zag or wavy shape for these patterns. Claim 1 therefore is not anticipated by Kanemitsu et al.

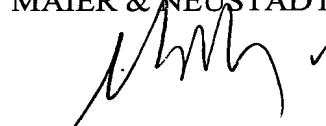
Claim 2 corresponds to Claim 1 and further recites that the thermal rolls are "arranged to provide a nip between the annular projections" of the rolls. Clearly, there is no "nip" between the anvils 18 in Kanemitsu et al. Claim 2 further recites that the conveying device is arranged to convey the film through the nip between the annular projections of the thermal rolls to form the strippable seal. Again, there is no nip between annular projections in Kanemitsu et al.

Finally, Claim 2 further recites that at least one of the annular projections has a wavelike or zig-zag shape "such that the strippable seal has a wavelike or zig-zag shape." As already mentioned, the anvils 18 in Kanemitsu et al do not form a strippable seal, and in any case do not form a strippable seal having a wavelike or zig-zag shape. Claim 2 therefore also clearly defines over this reference.

Applicant therefore respectfully submits that the present application is in a condition for allowance and respectfully solicits an early notice of allowability.

Respectfully submitted,

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IN THE CLAIMS

2. (New).